

Remarks

I. The Restriction Requirement

The Examiner has requested restriction of the previously filed claims 17-35 into one of the following six groups:

- I. Claims 17-21, and 23-27, drawn to a method for identifying compounds that have the activity of modulating sister chromatid separation in plant, classified in class 435, subclass 24.
- II. Claims 17-20, and 22-27, drawn to a method for identifying compounds that have the activity of modulating sister chromatid separation in animal, classified in class 435, subclass 24.
- III. Claims 28, 29, and 35, drawn to an inhibitor of a protease with separin-like cysteine endopeptidase activity, wherein said protease is human separin, classified in class 530, subclass 388.15.
- IV. Claims 30 and 31, drawn to method of treatment in a human comprising administering an effective amount of an inhibitor of a protease with separin-like cysteine endopeptidase activity, wherein said treatment is cancer treatment, classified in class 424, subclass 174.1.
- V. Claims 30 and 32, drawn to method of treatment in a human comprising administering an effective amount of an inhibitor of a protease with separin-like cysteine endopeptidase activity, wherein said treatment is for the prevention of birth defects, classified in class 424, subclass 142.1.
- VI. Claims 28, 33, and 34, drawn to an inhibitor of a protease with separin-like cysteine endopeptidase activity, wherein said protease is a plant separin, and a method for increasing the ploidy of plant cells comprising administering an inhibitor a plant separin, classified in class 424, subclass 130.1.

In response to the Examiner's restriction requirement, Applicants hereby provisionally elect, *with traverse*, Group II, represented by new claims 36-37 and 39-49,

for further prosecution. This election is made without prejudice to or disclaimer of the claims disclosed in other groups. Applicants reserve the right to petition from the restriction requirement under 37 C.F.R. §1.144.

With respect to the Examiner's division of the previous claims into six groups and the reasons stated thereof, Applicants respectfully traverse. For example, Groups I and II are closely related because the method for identifying compounds that inhibit sister chromatid separation in plants or in animal cells is the same. As delineated in the specification, the amino acid sequence of separin and the sequence motif, ExxR¹⁷², for SCC1 cleavage are evolutionary conserved in many different species including plants and animals. In addition, the mechanism of separin-dependent SCC1 cleavage is conserved in eukaryotic organisms. Groups I, II and III are related as between a method for identifying compounds and a compound identified by the disclosed method. Groups III, IV and V are related as between a compound and the process of using the compound to treat patients for disorders due to impaired sister chromatid separation, i.e. cancer and birth defects.

Even assuming, *arguendo*, that each of Groups I-VI represent distinct or independent inventions, Applicant submit that to search and examine the subject matter of all Groups together would not impose a serious burden on the examiner. For example, publications which disclose the method for identifying compounds with inhibiting activity for sister chromatid separation would also likely disclose inhibitor(s) identified by the claimed method and, the method to use or apply the identified inhibitor(s) to treat patients with disorders of impaired sister chromatid separation, thereby making it a simple matter for the Examiner to search and examine all six groups together. The M.P.E.P. §803 (Eighth Edition, Rev. August, 2001) states that:

If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.

Thus, Applicants respectfully request that all claims be searched and examined together in the subject application. Applicants retain the right to petition from the restriction requirement under 37 C.F.R. §1.144.

Reconsideration and withdrawal of the Restriction requirement as between Group I-VI, and consideration and allowance of all pending claims, are respectfully requested.

2. *The Election of Species Requirement*

The Examiner has indicated that if the claims in either of Group I or II are elected for further prosecution, Applicants are required under 35 U.S.C. § 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. (Paper No. 6, at ¶ 3-4).

Applicants hereby provisionally elect, *without traverse*, to further prosecute the species (1) inhibiting sister chromatid separation, in particular inhibiting separin's proteolytic activity. Applicants note that new claim 36 is generic. This election is made without prejudice to or disclaimer of the other claims or inventions disclosed.

Applicants assert the right to claim additional species in the event that a generic claim thereto is found to be allowable in accordance with 37 C.F.R. § 1.141(a). Consideration and allowance of all pending claims, are respectfully requested.

3. *Amendments to the Claims*

The claims 17-35 have been canceled without prejudice and disclaimer of the subject matter therein. New claims 36-57 have been added with claim 36 being the independent claim. The pending claims represent the invention of Groups I-VI. If the Examiner makes this restriction requirement final notwithstanding Applicants' traversal, Applicants will cancel claims directed to unelected subject matter at a later time. Upon entry of the foregoing Amendment, claims 36-57 will be subject to examination in the application. Support for the new claims can be found, *inter alia*, as described in the following table:

Claim Number	Location of Support in Specification
36-39	page 17, lines 6-12; page 20, lines 25-29; page 15, lines 16-21; page 26, lines 3-7
40	page 18, lines 19-20; page 20, line 30 to page 23, line 2
41-43	page 18, line 20 to page 19, line 16
44	page 20, lines 13-24; page 30, line 30 to page 31, line 14
45-47	page 19, line 26 to page 20, line 12; page 24, lines 11 to 14; page 26, lines 6-7
48-49	page 20, line 30 to page 21, line 9
50-53	page 23, lines 3-11 and page 24, line 19 to page 25, line 12
54	page 25, lines 13-22
55-56	page 25, line 23 to page 26, line 7
57	page 23, lines 12-15 and lines 21-24; page 25, lines 1-12

These changes are believed to introduce no new matter, and their entry is respectfully requested.

Conclusion

It is respectfully believed that this application is now in condition for substantive examination. Early notice to this effect is respectfully requested.

Respectfully submitted,

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Version with markings to show changes made

In the Specification:

The specification was amended as follows:

On page 2, the priority statement, which was inserted previously in the Preliminary Amendment filed on August 3, 2000, was replaced with the following paragraph:

--This application claims priority benefit to U.S. provisional appl. no. 60/126,767, filed March 3, 1999.--

In the Claims:

The claims 17-35 were canceled.

The new claims 36-57 have been added.